

Amendment Dated December 21, 2007
Serial No. 10/744,000

REMARKS

Reconsideration of the rejections set forth in the Office Action is respectfully requested in view of the Amendments to the claims and the following arguments. By this Amendment, claims 1-40 have been amended. Currently, claims 1-40 are pending in this application.

Objection to the claims

The Examiner objected to the format of claims 2-19 and 21-40. Applicants have amended the claims in a manner consistent with that suggested by the Examiner and respectfully request that the objection to the claims be withdrawn.

Rejections under 35 USC 102 and 103

Claims 1-40 were rejected under 35 USC 103 over Ishwar (U.S. Patent Application Publication No. 2004/0078469), in view of Haddock (U.S. Patent Application Publication 2004/0081093). This rejection is respectfully traversed in view of the amendments to the claims and the following arguments.

This application relates to a way of interworking Frame Relay and Ethernet networks such that multiple Quality of Service (QoS) classes may be supported across the interworked network. Specifically, applicants proposed to provide one or more interworking units between the Ethernet and Frame Relay networks to enable multiple levels of quality of service to be provided to traffic that is required to span between the two networks. (Specification at paragraphs 37-50).

Applicants have amended independent claim 1 to recite that the method includes the steps of identifying a packet according to an Ethernet protocol for servicing, determining a QoS metric for the identified packet, and based upon the determined QoS metric, servicing the identified packet for transmission in accordance with a Frame Relay protocol. New independent claim 13 recites interworking in the reverse direction, in which the method includes the steps of identifying a packet according to a Frame Relay protocol for servicing, determining a QoS metric for the identified packet by considering FR information, and based upon the determined QoS metric, servicing the identified packet for transmission in accordance with an Ethernet protocol. Independent claims 21 and 32 have been amended in a similar manner. The

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combination of references cited by the Examiner does not teach or suggest a method/system of this nature.

Ishwar teaches a system that allows customer specific VLANs to be created. Paragraph 28 of Ishwar summarizes how this is performed. Specifically, Ishwar teaches a three step process in which first a customer ID is identified from the incoming port and VLAN ID associated with the traffic. The customer ID and the VLAN ID are then combined to form a customer-specific VLAN ID. The customer-specific VLAN ID (Customer ID plus old VLAN ID) thus allows a larger number of VLANs to be created on the network by allowing reuse of the traditional 12 bit VLAN ID for different customers. (Ishwar at par. 13).

Ishwar primarily describes an Ethernet system. As far as applicants can tell, Ishwar only mentions Frame Relay at one place, where Ishwar states that the customer specific VLAN IDs may be used by a service provider edge device that has line cards that implement network protocols such as Ethernet, ATM, and Frame Relay. (Ishwar at Paragraph 30). Ishwar then continues in the next sentence to state that "Although an Ethernet-based switch/router is described, the disclosed customer-specific VLAN techniques may be applied to any network node that supports VLAN traffic." Thus, it appears from this paragraph that Ishwar is primarily proposing to implement the customer specific VLAN IDs in an Ethernet based switch/router, but that the same techniques may be applied to other nodes that support VLAN traffic. This does not suggest that the switch/router is identifying packets according to an Ethernet protocol for servicing and servicing the packet for transmission in accordance with a Frame Relay protocol, but rather that either type of line cards may be used on a particular switch.

Haddock teaches a system that is implemented in an Ethernet switch. Note, for example that the ports 15 in Fig. 1A are all Ethernet ports – Gigabit Ethernet ports 105 or Octal fast Ethernet ports 110. Haddock does not appear to mention Frame Relay or how Frame Relay and Ethernet may be interworked. At paragraph 24, Haddock states that the switch he is describing is implemented as an Ethernet switch. Haddock then continues to state that the methods he is proposing may be equally applicable to other types of network devices or packet forwarding devices. Haddock does not explicitly mention Frame Relay, however, in this section.

Several of the claims, such as claim 16, previously mentioned the use of both Ethernet and Frame Relay protocols. In connection with rejecting these claims, the Examiner noted that Ishwar failed to teach a method where the first protocol was Ethernet and the second protocol

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was Frame Relay. The Examiner stated, however, that Haddock taught this feature, citing paragraph 22 of Haddock and the Abstract. In both the abstract and paragraph 22, Haddock teaches that a number of QoS forwarding queues may be provided at each port, which may then be used to forward traffic onto the network. Traffic from different traffic groups may be placed in different queues, and a scheduling mechanism used to forward the packets from the various queues. This is a typical way in which network traffic is handled at a network element. The description at these cited portions of Haddock does not mention Frame Relay, and does not describe a system that is specific to how Frame Relay works. Rather, Haddock merely states that there may be multiple queues implemented per port. This is a common way of queuing traffic at network ports and is not specific to Frame Relay. Accordingly, applicants respectfully submit that the cited portions of Haddock do not support the Examiner's position.

Thus, applicants respectfully submit that Ishwar and Haddock, alone and collectively, fail to address how quality of service may be implemented across Frame Relay and Ethernet networks. Accordingly, applicants respectfully submit that the claims as amended are patentable over the cited art. The Examiner is thus respectfully requested to withdraw the rejection in view of the amendments to the claims and the preceding arguments.

Conclusion

Applicants are interested in moving prosecution forward, and would be very interested to talk with the Examiner about what applicants perceive as the novel invention, the cited art, and how applicants believe the claims recite the novel and unobvious aspects of this invention. Accordingly, applicants invite the Examiner to contact the undersigned at any time during the course of the prosecution to discuss this case. In particular, applicants would be happy to discuss this case with the Examiner to hopefully find patentable subject matter if the Examiner feels that a subsequent rejection of the claims continues to be warranted. Likewise, if there are any questions or concerns regarding the amendments or these remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

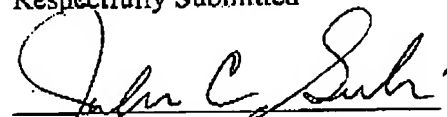
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If any fees are due in connection with this filing, the Commissioner is hereby authorized to charge payment of the fees associated with this communication or credit any overpayment to Deposit Account No. 502246 (Ref: NN-16201).

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Respectfully Submitted



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